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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,343	04/22/2005	Min-Hwa Lee	54653-005003	1572

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EXAMINER	
ZEWARI, SAYED T	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,343	LEE, MIN-HWA	
	Examiner	Art Unit	
	Sayed T. Zewari	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-12 and 14-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *17-31* is/are allowed.

6)☒ Claim(s) *1-5,7-12,14-16 and 32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Response to Arguments

2. Applicant's arguments filed on 2/16/2007 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 17-31 are allowed.

DETAILED ACTION

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wendelrup et al. (US 6,584,329) in view of Lebby et al. (US 6,131,017), further in view of Danet et al. (US 6,600,910).

With respect to claim 1, Wendelrup discloses a battery pack device for a mobile communication terminal **(See Wendelrup's figure 1, col.1 lines 5-12, lines 13-21, lines 32-42, col.2, lines 43-54, col.3 lines 35-45, lines 46-52)** comprising: at least one battery cell for supplying a DC power to a body of the mobile communication terminal via power supply terminals **(See Wendelrup's figure 1, col.3 lines 29-34, lines 35-45, lines 46-52)**; an additional circuit unit for providing additional functions to the terminal body **(See Wendelrup's figure 1, col.3 lines 29-34, lines 35-45, lines 46-52)**; and a control unit for controlling an operation of the additional circuit unit while performing data transmission and reception with respect to an external device **(See Wendelrup's figure 1, col.3 lines 46-52 lines 58-67, col.4 lines 1-12)**, the control unit including an additional function processor for controlling the additional circuit unit **(See Wendelrup's figure 1, col.3 lines 46-52 lines 58-67, col.4 lines 1-12)**, and a communication unit for performing data transmission and reception with respect to the terminal body **(See Wendelrup's figure 1, col.3 lines 29-34, lines 35-45, lines 46-52, lines 58-67)**, the communication unit including a communication controller for transforming data obtained in accordance with a data processing operation of the additional function processing unit into data having a predetermined transmission format, while supplying data, externally received thereto, to the additional function processor as an operating command, a modulator/demodulator for performing a modulation/demodulation for data to be sent to the communication controller or received from the communication controller, and a transmitter/receiver for receiving modulated data received from the

modulator/demodulator while transmitting data, to be demodulated, to the modulator/demodulator body **(See Wendelrup's figure 1, col.3 lines 29-34, lines 35 45, lines 46-52, lines 58-67, col.4 lines 22-56, figure 3-4, col.4 lines 57-67, col.5 lines 1-7)**. However, Wendelrup does not specifically discloses a system wherein the transmitter/receiver is inherently a coil arranged in the form of a plate extending along a coupling surface of the battery pack device to be coupled with a facing coupling surface of the terminal body so that it faces a coil arranged at the coupling surface of the terminal body in a state in which the battery pack device is coupled to the terminal body, thereby forming a transformer. But Danet et al discloses these limitations **(See Danet's abstract, figure 1, col.1 lines 32-67, col.2 lines 1-12, 30-42).** Therefore, it would have been obvious to one skilled in the art to modify the invention of Wendelrup and include the system of Danet in it, thereby providing a system with reduced size and surface on which more components can be mounted, as disclosed by Danet **(See Danet's col.1 lines 51-63)**.

With respect to claim 11, Wendelrup discloses a mobile communication terminal comprising communication interface, and a main control unit for controlling the units of the terminal body **(See Wendelrup's figure 1, col.1 lines 2-34, lines 35-45)**, further comprising: an inherent power supply unit for processing a DC power received from a battery pack device via power supply terminals, and supplying the processed DC power to the entire system of a body of the mobile communication terminal **(See Wendelrup's figure 1, col.1 lines 2-34, lines 35-45, lines 56-52 where there is inherent circuitry to process or condition the power supply)**; an additional function processing unit for

processing an additional function of the battery pack device **(See Wendelrup's figure 1, col.1 lines 29-34, lines 35-45, lines 56-52 where the microcontroller 114 servers a function processing unit)**; and a communication unit for performing data transmission and reception with respect to the battery pack device **(See Wendelrup's figure 1, col.1 lines 29-34, lines 35-45, lines 56-52, lines 58-67)**; the communication unit including a communication controller for transforming data obtained in accordance with a data processing operation of the additional function processing unit into data having a desired transmission format, while supplying data received from the battery pack device to the additional function processing unit **(See Wendelrup's figure 1, col.1 lines 29-34, lines 35-45, lines 56 52, col.4 lines 1-12)**, a modulator/demodulator for performing a modulation/demodulation for data to be sent to the communication controller or received from the communication controller, and a transmitter/receiver for receiving modulated data received from the modulator/demodulator while transmitting data, to be demodulated, to the modulator/demodulator **(See Wendelrup's figure 1, col.1 lines 29-34, lines 35-45, lines 56-52, col.4 lines 1-12, where modulator/demodulator is an inherent part of a transceiver).** However Wendelrup does not specifically disclose a keypad, display unit, and RF communication interface. But Lebby discloses a keypad, display unit and RF communication interface **(See Lebby's figure 1 and 3, figure 5(68) col.6 lines 22-56)**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Wendelrup and have a keypad, display unit and RF interface included in it, as disclosed by Lebby, thereby providing a wireless interface between the

cellular phone and the battery pack as disclosed by **(See Lebby's figure 5(68) col.6 lines 22-56)**. However, Wendelrup does not specifically discloses a system wherein the transmitter/receiver is inherently a coil arranged in the form of a plate extending along a coupling surface of the battery pack device to be coupled with a facing coupling surface of the terminal body so that it faces a coil arranged at the coupling surface of the terminal body in a state in which the battery pack device is coupled to the terminal body, thereby forming a transformer. But Danet et al discloses these limitations **(See Danet's abstract, figure 1, col.1 lines 32-67, col.2 lines 1-12, 30-42).** Therefore, it would have been obvious to one skilled in the art to modify the invention of Wendelrup and include the system of Danet in it, thereby providing a system with reduced size and surface on which more components can be mounted, as disclosed by Danet **(See Danet's col.1 lines 51-63)**.

With respect to claim 2, Wendelrup discloses a battery pack wherein: the battery pack device further comprises a detecting unit for detecting the amount of electric power supplied to the power supply terminals **(See Wendelrup's figure 1(115), col.3 lines 46-52)**; and the control unit further includes a power controller for controlling respective power consumption levels of circuits internally provided at the battery pack device in accordance with the amount of electric power detected by the detecting unit **(See Wendelrup's figure 1(103 and 114), col.3, lines 29-34, lines 46-52 lines 58 -67, col.4 lines 1-12)**.

With respect to claim 3, Wendelrup discloses a battery pack wherein: the detecting unit inherently includes current detecting means for detecting output current at

the power supply terminals **(See Wendelrup's figure 1(115), col.3 lines 46-52)**; and the power controller is adapted to switch an operating mode of the control unit to a low-power driving mode while cutting off the supply of electric power to the additional circuit unit when the output current detected by the current detecting means is not more than a predetermined level **(See Wendelrup's figure 1(103 and 114), col.3, lines 29-34, lines 46-52 lines 58 -67, col.4 lines 1-12)**,

With respect to claim 4, Wendelrup discloses a battery pack wherein the control unit inherently includes a power controller for controlling respective power consumption levels of circuits internally provided at the battery pack device in accordance with a power management mode command from the terminal body received via the communication unit **(See Wendelrup's figure 1(103 and 114), col.3, lines 29-34, lines 46-52 lines 58 -67, col.4 lines 1-12)**.

With respect to claim 32, the above combinations disclose all the limitations of the claims 32.

5. Claims 5, 7-10, 12, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wendelrup et al. (US 6,584,329) in view of well-known prior art (MPEP 2144.03).

With respect to claim 5 and 12, Wendelrup discloses all the limitations of claim 5 and 12. Wendelrup does not disclose a battery pack with transceiver that includes a choke filter and a capacitance element. However, official notice is taken that the

concept and use of choke filters and capacitance elements with transceivers is well known and expected in the art. Therefore, it would be obvious to one of ordinary skill in the art to use choke filter and capacitance elements, as suggested by applicant, for connections with transceivers.

With respect to claim 7 and 14, Wendelrup discloses all the limitations of claim 7 and 14. Wendelrup does not disclose a battery pack with a transceiver wherein the modulator/demodulator is of an FM system operating at a relatively low frequency. However, official notice is taken that the concept and use of FM in a modulator/demodulator is well known and expected in the art. Therefore, it would be obvious to one of ordinary skill in the art to use FM system operating at low frequency, as suggested by the applicant.

With respect to claim 8 and 15, Wendelrup discloses all the limitations of claim 8 and 15. Wendelrup does not disclose a battery pack with a transceiver wherein the modulator/demodulator is a Bluetooth RF transmitting/receiving module. However, official notice is taken that the concept and use of Bluetooth RF transceiver is well known and expected in the art. Therefore, it would be obvious to one of ordinary skill in the art to use a Bluetooth module for transmitting and receiving.

With respect to claim 9 and 16, Wendelrup discloses all the limitations of claim 9 and 16. Wendelrup does not disclose a battery pack with a transceiver wherein the transmitter/receiver is an infrared transmitter/receiver module. However, official notice is taken that the concept and use of infrared transmitter/receiver well known and expected

in the art. Therefore, it would be obvious to one of ordinary skill in the art to use an infrared module for transmitting and receiving.

With respect to claim 10, Wendelrup discloses all the limitations of claim 10. Wendelrup does not disclose a battery pack with a transceiver wherein the transmitter/receiver includes connecting pins protruded from the battery pack device. However, official notice is taken that the concept and use of such protruded connecting pins for connection purposes is well known and expected in the art. Therefore, it would be obvious to one of ordinary skill in the art to use such connecting pin to connect battery pack to a terminal.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

7. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sayed T. Zewari whose telephone number is 571-272-6851. The examiner can normally be reached on 8:30-4:30.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sayed T. Zewari

April 18, 2007

LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER